

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

In re: FTX TRADING, LTD., *et al.*,

Debtors.

Chapter 11

Case No. 22-11068 (JTD)

(Bankr. D. Del.)

(Jointly Administered)

MAPS VAULT LIMITED,

Appellant,

V.

Civ. No. 24-804 (TLA)

FTX TRADING LTD., *et al.*,

Appellees.

FONDATION SERENDIPITY, *et al.*,

Appellants,

V.

Civ. No. 24-806 (TLA)

FTX TRADING LTD., *et al.*,

Appellees.

MEMORANDUM OPINION AND ORDER

An estimation proceeding presents a factual question: How much is a creditor’s claim worth? The bankruptcy of cryptocurrency exchange FTX Trading Ltd. (“FTX”) required the Bankruptcy Court to answer this question about three creditors’ claims to cryptocurrency tokens FTX held on their behalf. These creditors—Maps Vault Limited (“Maps Vault”), TMSI SEZC Ltd. (“TMSI”), and Fondation Serendipity, Fondation Elements, Serendipity Network Ltd., and Liquidity Network Ltd. (collectively, “Fondation”)—thought their claims were worth, in total, more than \$800 million. After extensive proceedings, the Bankruptcy Court found they were worth next to nothing. That result may seem surprising. But there were good reasons for it: expert testimony indicated the tokens were exceptionally illiquid assets with no inherent value. Maps Vault and Fondation appealed to this Court via 28 U.S.C. § 158(a)(1).

Cryptocurrency claims are new territory for estimation proceedings. But their novelty does not change their nature. The value of any claim is a matter of fact. And on matters of fact, there is “a serious thumb on the scale for the bankruptcy court.” *U.S. Bank Nat’l Ass’n v. Village at Lakeridge, LLC*, 583 U.S. 387, 394 (2018). Because the Bankruptcy Court had ample grounds for its findings in this fact-intensive case, I affirm.

I. BACKGROUND

In the spring of 2022, Sam Bankman-Fried, the founder of FTX, gave an interview about “How to Make Money in Crypto.” He outlined a scheme so simple that he thought anyone could pull it off with just “five minutes” and “an internet connection.” First, you create a new cryptocurrency token. The token is “actually worthless,” but you do not stop

That fall, cryptocurrency media organization CoinDesk published an article suggesting Bankman-Fried’s advice for how to make money in crypto was FTX’s business model. Panicked by the prospect FTX’s own token and the tokens of its affiliates might be worthless, depositors raced to withdraw their holdings. Unable to fulfill the withdrawals, FTX suspended transactions. A few days later—November 11, 2022 (the “Petition Date”)—FTX and related entities (“the Debtors”) filed for relief under Chapter 11 of the Bankruptcy Code.

Millions of creditors filed claims to recover cryptocurrency assets FTX held on their behalf. The Debtors moved under 11 U.S.C. § 502(c) to estimate the value of these claims. In January 2024, the Bankruptcy Court held its first estimation hearing. It determined estimation was appropriate and adopted the Debtors' proposal for how to estimate almost all of the claims.

Excluded from this ruling were the claims of three creditors (collectively, “the Creditors”) who had objected to the Debtors’ proposal: Maps Vault, TMSI, and Fondation.

The Creditors asserted claims against the estate on account of three utility tokens FTX held for them: MAPS, OXY, and SRM. Utility tokens are designed to play specific roles on particular blockchains, in contrast to transactional tokens, like Bitcoin, which are designed for broader use as payment methods. MAPS was launched to provide users of Maps.me, an offline maps and travel-booking application, with discounts, personalized offers, and a role in the governance of the app. OXY was designed for the Oxygen Protocol, a financial platform that enabled participants to borrow, lend, and trade assets. SRM was created to facilitate the operation of the Serum exchange, a decentralized platform for trading other cryptocurrencies. OXY and SRM gave users of their respective platforms lower trading fees and a share of the platform's revenue.

The Debtors had a hand in all three tokens. Bankman-Fried advised the projects on which MAPS and OXY operated. An affiliated entity, Alameda, invested in them. FTX and Alameda created SRM. In turn, the Debtors held over 95 percent of the supply of these tokens: over 99 percent of MAPS, over 97 percent of OXY, and over 95 percent of SRM—so much that these holdings amounted to 53 percent of the face value of the Debtors’ assets.

Sabrina T. Howell, Professor of Finance at the NYU Stern School of Business, testified for the Debtors about how to calculate the value of the Creditors' claims from those prices. Importantly, she testified that estimating their value was not a simple matter of multiplying the market price per token by the number of tokens. Instead, an accurate estimate required discounting the value twice over to account for their illiquidity. One discount, an Asset Liquidation Discount ("ALD"), was necessary to reflect the fact that an orderly liquidation of the Debtors' holdings would dramatically increase the market supply of the tokens—driving down the price. Another, a Discount for Lack of Marketability ("DLOM"), was necessary to reflect the fact that on the Petition Date, most of the tokens were "locked"—that is, were contractually prohibited from trading for a set period of time, often years—making them less valuable than tokens that could be sold or bought immediately.

5

To complete his estimate, he applied the “blockage discount method” (“Blockage Method”), not the KO Model. Specifically, he averaged the results of two Blockage Method models, one from David Chaffe and another from John Finnerty. He concluded the value of each token need only be discounted between 36 and 46 percent. As that point underscores, he did not dispute that the illiquidity of the tokens warranted a significant discount. The battle of the experts was not about whether to apply a discount, but how steep the discount should be.

Maps Vault and Fondation appealed the estimation of the value of their claims to the MAPS tokens and the OXY tokens.

This Court reviews a bankruptcy court’s legal conclusions *de novo* and its factual findings for clear error, *In re Nortel Networks Inc.*, 737 F.3d 265, 270 n.1 (3d Cir. 2013), affirming factual determinations unless they are “completely devoid of minimum evidentiary support displaying some hue of credibility, or ... [they] bear[] no rational

III. DISCUSSION

1. The Bankruptcy Court did not abuse its discretion in qualifying Howell as an expert and admitting her reports.

a. Qualifying Howell

9

qualify, an expert need only “possess skill or knowledge greater than the average layman.” *Betterbox Commc’ns Ltd. v. BB Techs., Inc.*, 300 F.3d 325, 328 (3d Cir. 2002). The reliability of an expert’s testimony is often a function of how much specialized knowledge she possesses. *In re Paoli*, 35 F.3d at 741.

Howell was qualified to testify about the value of the tokens. She is a Professor of Finance at the NYU Stern School of Business, has a PhD in Government and Economics from Harvard University, lectures on digital assets, and has published a peer-reviewed paper on initial coin offerings. That is plenty.

Maps Vault argues Howell was not qualified because she had no prior experience in the valuation of creditor claims to cryptocurrency assets. The law does not demand such specific expertise. *See In re Paoli*, 35 F.3d at 741 (collecting cases holding, for example, that engineer who had not designed or manufactured elevators qualified as expert on whether elevator button design was defective). The Bankruptcy Court did not abuse its discretion in qualifying her.

b. Admitting Howell’s Rebuttal Report

Maps Vault argues the Bankruptcy Court should not have considered Howell’s Rebuttal Report at all. First, Maps Vault asserts that having rejected her primary report, the Bankruptcy Court could not rationally credit her Rebuttal Report. It suggests that in general, if a court rejects an expert’s primary report, it cannot credit her rebuttal report. But there is no authority for that position. For good reason: an expert’s rebuttal report may

rest on grounds independent of her primary report, offering a critique of the target on its own terms. That is the case here.

Second, Maps Vault asserts that Howell’s reliance on the KO Method in her primary report discredits her Rebuttal Report. The Bankruptcy Court rejected that method, Maps Vault reasons, so it should not have trusted her subsequent testimony. But the portion of her Rebuttal Report the Bankruptcy Court found persuasive eschewed the KO Method for the Blockage Method—the very method Maps Vault’s expert deployed. So her initial use of the KO Method does not undermine the Bankruptcy Court’s adoption of her later use of the Blockage Method. The reasons for rejecting the KO Method were not reasons to reject the part of her Rebuttal Report that did not use it.

c. Denying Maps Vault’s motion to exclude portions of Howell’s Rebuttal Report

Howell’s Rebuttal Report included opinions that were not in her primary report, including that the relationship between FTX and these tokens cast doubt on their worth and that the tokens had no “fundamental value.” Maps Vault and Fondation argue the Bankruptcy Court abused its discretion in denying Maps Vault’s motion to exclude these parts of Howell’s Rebuttal Report. It did not.

First, Maps Vault contends the Bankruptcy Court should have excluded anything from Howell’s Rebuttal Report that was not in her primary report. Not so. “[T]he permissible scope of expert testimony is quite broad[.]” *Hill v. Reederei F. Laeisz G.M.B.H., Rostock*, 435 F.3d 404, 423 (3d Cir. 2006). There is no “bright line rule that

every opinion by an expert must be preliminarily stated in the report, or forever be precluded.” *Id.* The mere fact these assertions were new does not warrant excluding them.

Second, Maps Vault and Fondation challenge her discussion of FTX and her assessment that the coins at issue were fundamentally worthless as beyond the permissible scope of a rebuttal report. But these facts and opinions were permissible because they directly responded to the report of the Creditors’ expert, Konstantinidis. A rebuttal report may not contradict the primary report or give the expert a re-do, *Crowley v. Chait*, 322 F. Supp. 2d 530, 551 (D.N.J. 2004), but it may “cite new evidence and data so long as [it] is offered to directly contradict or rebut the opposing party’s expert,” *Nat’l Med. Imaging v. U.S. Bank N.A.*, No. 16-5044, 2019 WL 9809616, at *2 (E.D. Pa. Jan. 31, 2019) (quoting *Am. Diabetes Ass’n v. Friskney Fam. Tr., LLC*, No. 13-3720, 2015 WL 12826476, at *2 (E.D. Pa. July 21, 2015)). A rebuttal report may even offer “new opinions” if they are “not pulled out of whole cloth but [are] instead given to directly contradict” the other side’s argument. *Haskins v. First Am. Title Ins. Co.*, No. 10-5044 (RMB/JS), 2013 WL 5410531, at *4 (D.N.J. Sept. 26, 2013).

In his primary report, Konstantinidis asserted MAPS and OXY were valuable because of their roles on their respective platforms and projected their value and trading volume would increase in the near future. He also projected their future value in part as a function of their market price at the Petition Date.

Howell offered the challenged facts and opinions to rebut these claims. Her opinion the tokens lacked any inherent value responded to Konstantinidis’s opinion that their platform functions secured their value. Her observations about the tokens’ connections to

FTX challenged Konstantinidis’s claims about their value and their future utility (and hence likely trading volume). Her observations that FTX held the vast majority of the supply of the tokens challenged Konstantinidis’s inference from their market price to the value of the Creditors’ claims. Consequently, it was not an abuse of discretion to consider them.

2. The Bankruptcy Court did not clearly err in estimating the value of the Creditors’ tokens in view of the Debtors’ extensive holdings.

The Bankruptcy Court estimated the value of the Creditors’ claims “taking into consideration the impact that the liquidation of the Debtors’ holdings would have on the market prices” of the tokens. A2442. The Creditors challenge two aspects of this approach. Neither was clearly wrong.

a. The significance of the Debtors’ holdings is a matter of fact reviewed for clear error.

Maps Vault argues that whether to consider the Debtors’ holdings in the estimation of the Creditors’ claims was a predominantly legal mixed question of fact and law subject to review *de novo*. In truth, it was a factual question subject to clear error review.

A mixed question of fact and law is one that asks whether certain facts satisfy a certain legal rule. *U.S. Bank*, 583 U.S. at 394. To use a recent bankruptcy example: whether a particular person is a non-statutory insider is a mixed question. *See id.* at 397. Some mixed questions are predominantly factual, “compelling [courts] to marshal and weigh evidence, make credibility judgments, and otherwise address” facts “that utterly resist generalization.” *Id.* at 396. Others are predominantly legal, “requir[ing] courts to

expound on the law, particularly by amplifying or elaborating on a broad legal standard.” *Id.* The more fact-intensive a mixed question is, the more deference a court’s answer enjoys; the more law predominates, the less deference. *See id.*

Maps Vault says “[t]he question addressed by the Bankruptcy Court was what is a reasonable discount to be applied to the Petition Date market price for each of the Tokens in light of the fact that the Debtors hold 95% of the supply[.]” Opening Br. 36. That is a question of fact. The reason: In an estimation proceeding, the “ultimate finding of fact” is how much the claims are worth. *Bittner*, 691 F.2d at 138. Here, the discount rate is one of “the subsidiary facts on which such a finding is based.” *See id.* And the extent the Debtors’ holdings warrant a lower discount rate is a fact subsidiary to that one. The Bankruptcy Court’s reasoning confirms that impression: the Court decided to consider one fact (how much the Debtors held) because it bore on another (the appropriate discount rate) which, in turn, bore on the ultimate fact (how much the Creditors’ claims are worth). Notice, too, that the question does not have the defining feature of a mixed one: answering it does not involve determining whether certain facts satisfy a legal rule. To the extent this is a mixed question of fact and law at all, it is “about as factual sounding as any mixed question gets.” *U.S. Bank*, 583 U.S. at 397.

Despite Maps Vault’s insistence the question is a predominantly legal mixed question of fact and law, its own briefing illustrates the issue’s factual nature. Consider a couple of examples. By Maps Vault’s own account, the Bankruptcy Court considered the effect liquidating the Debtors’ tokens would have on the value of the Creditors’ claims because refusing to do so would result in an inaccurately high valuation. That is a concern

for factual accuracy, grounded in the Court’s assessment of the evidence. Similarly, Maps Vault argues the Bankruptcy Court erred because, as Konstantinidis testified, the value of the Creditors’ claims is “not correlated with holdings that other investors may hold.” A1825. That is a factual argument that turns on the resolution of the battle of the factual experts.

At bottom, Maps Vault thinks the Debtor’s holdings did not bear on the value of the Creditors’ claims. After hearing competing testimony, the Bankruptcy Court found it did and discounted the claims accordingly. That finding is factual through and through. *See In re Tonopah Solar Energy, LLC*, 657 B.R. 393, 414 (D. Del. 2022) (reviewing for clear error how Bankruptcy Court weighed relevance and significance of facts in estimation proceeding).

Maps Vault and Fondation advance three arguments that the Bankruptcy Court’s approach involved an error of law. None proves persuasive. First, they argue the Bankruptcy Court’s decision to consider the Debtors’ holdings misconstrued its statutory obligation to “estimate[] for purpose of allowance . . . any contingent or unliquidated claim,” 11 U.S.C. 502(c)(1)—valuing the claims from the perspective of the Debtors, rather than the Creditors. However, the Bankruptcy Court did not conflate what the Creditors’ claims were worth with what the Debtors could realize from selling their holdings; it merely concluded as a matter of fact that the value of their claims was diminished by this form of illiquidity.

Second, Maps Vault and Fondation assert the Bankruptcy Court violated its legal obligation to value its claims “as of the Petition Date,” as if the FTX bankruptcy had never

happened. *See Owens Corning*, 322 B.R. at 722. As of that date, the Debtors had not liquidated their tokens. So, Maps Vault concludes, the Bankruptcy Court could not consider how a liquidation would affect the value of the Creditors' claims. The law provides otherwise. When liquidation is a live possibility, it can be appropriate to assign claims the value they would have if the Debtors liquidated their holdings of the same type of asset. *See In re Sears Holding Corp.*, 51 F.4th 53 (2d Cir. 2022). And, as discussed in the next section, it was not clear error to find as a matter of fact that liquidation was probable as of the Petition Date.

Third, Maps Vault suggests the sheer novelty of the enterprise makes the question a predominantly legal one. But novelty does not convert a matter of fact into a matter of law. The Bankruptcy Court referred to the task as one of "first impression" solely because no bankruptcy court previously had estimated how much a claim to cryptocurrency is worth. That question—the "ultimate" question in an estimation proceeding—is factual. *Bittner*, 691 F.2d at 136 n.2, 138.

b. The Bankruptcy Court did not clearly err in estimating the value of the Creditors' claims in the context of the Debtors' vast holdings.

Several facts supported the Bankruptcy Court's finding that the value of the Creditors' claims depended in part on the liquidation value of the Debtors' holdings. The first is that by the Petition Date, there was reason to think FTX and third parties who held tokens with it would liquidate their holdings of MAPS and OXY. FTX was distressed to the point that it had to suspend trading and withdrawals. The second is that these tokens

were vulnerable to FTX-specific risk. Even if FTX were not going to liquidate its holdings, these tokens' futures were tied to FTX's—which looked grim. The third is that FTX's massive holdings of the supply of these tokens suggested the market price of the tokens was artificially high—and hence the Creditors' holdings had much less value than the market price suggested. On the Petition Date, the Debtors held over 99 percent of the supply of MAPS, over 97 percent of the supply of OXY, and over 95 percent of the supply of SRM. Ignoring that fact would have yielded an inflated market value. Insofar as the Bankruptcy Court had to exercise its judgment to ensure its estimate reflected these facts, estimating the Creditors' claims as if the entire supply were going to be liquidated (in an orderly manner) was not clearly wrong.

Maps Vault contends that, in the field of valuation, best practice is to value creditors' claims only—not the value of others' holdings of comparable assets. But the Bankruptcy Court did value Maps Vault's holdings. It just did so with its eyes on all the facts relevant to their value. In this distinctive context, that included the fact the Debtors held so many of the same tokens. In any case, Maps Vault's claim about valuation best practices relied on the unexplained assertion of a single expert. The Bankruptcy Court had no obligation to take his word for it. *See VanDine v. Summit Treestands, LLC*, No. 23-0027, 2024 WL 3160326, at *6 (E.D. Pa. June 25, 2024).

In its reply brief, Maps Vault emphasizes that even though FTX *held* almost all of the supply of these tokens, it did not *own* all of its holdings. That may be true, but it need not change the analysis. The fact almost none of the tokens were trading on the open market still implies the market price was exaggerated. The close relationship between the

tokens and FTX still implies they were exposed to FTX-specific risk. And the distress facing FTX in the lead up to the Petition Date still made it reasonable to infer the owners of these tokens would liquidate them when they could, crashing their price.

In sum, the Bankruptcy Court understood and fulfilled its legal duty to estimate the value of the Creditors' claims. It just turns out that, as a factual matter, those claims' value depends on the value of the Debtors' holdings of the vast majority of the supply of the same tokens. Because the Bankruptcy Court's findings were not "completely devoid of a credible evidentiary basis," *Interfaith Cmty. Org. v. Honeywell Int'l, Inc.*, 399 F.3d 248, 254 (3d Cir. 2005) (cleaned up), the Bankruptcy Court did not clearly err by valuing the Creditors' claims in light of the Debtors' holdings.

c. The Bankruptcy Court did not clearly err in accepting Howell's assumptions about the liquidation of the Debtors' holdings.

Maps Vault also argues that even if the Bankruptcy Court was right to estimate the value of its claims in light of the value of the entire supply of MAPS and OXY, the Bankruptcy Court was wrong to rely on flawed testimony from Howell about how that would work.

First, Maps Vault claims Howell assumed the Debtors would sell their holdings all at once, defying common sense (which would favor a gradual liquidation to preserve the value of the estate) and the Bankruptcy Court's Digital Sale Order (which required a gradual liquidation). In fact, the relevant Howell analysis—her modified application of the

Blockage Method in the Rebuttal Report—assumed a gradual, orderly sale that, depending on certain assumptions, would take at least 5 years and as many as 211. Hardly a fire-sale.

Second, Maps Vault faults Howell for failing to consider alternative ways the Debtors could have maximized the value of the estate, like “burning” (destroying) some of its own tokens to prop up the value of the Creditors’ holdings. Maps Vault appears to be right that Howell did not consider this option. But Maps Vault’s expert did not consider this approach either, so it is not clear the record would have enabled the Bankruptcy Court to consider it. Nor is it clear whether or how much of a difference burning would have made.

Maps Vault and Fondation have failed to show the Bankruptcy Court clearly erred in adopting Howell’s views about how the Debtors’ holdings would be liquidated.

3. The Bankruptcy Court did not clearly err in rejecting Konstantinidis’s projection of trading volume.

Konstantinidis projected the trading volume of MAPS and OXY would increase more than 850 percent in the first year after the Petition Date. He derived that projection from the trading volume of these tokens in the 24 hours before the Petition Date and the trading volume growth of 20 “peer” tokens. The Bankruptcy Court’s finding that trading volume would increase less than he thought was not clearly erroneous.

First, trading volume immediately before the Petition Date was unusually elevated because of the impending collapse of FTX. In consequence, Konstantinidis worked from an unrepresentatively high baseline trading volume. Nevertheless, the Bankruptcy Court

accepted his estimate of initial trading volume. From the start, then, Maps Vault and Fondation benefitted from a debatable finding in their favor.

Second, the Bankruptcy Court reasonably rejected Konstantinidis's projection of trading volume growth because the "peer" tokens were not true peers. Konstantinidis did not explain how his criteria identified true peers. The features he used—availability on the Ethereum blockchain, activity for the prior 5 years, average daily trading volume between \$1 million and \$30 million, and status as non-stablecoins—sweep broadly. Konstantinidis limited his basket of "peer" tokens to "relatively successful cryptocurrencies." However, there was no evidence MAPS or OXY was or was likely to be as successful as these other tokens. In fact, the evidence suggested that because MAPS and OXY were intertwined with FTX, the collapse of FTX would imperil them. By contrast, none of the supposed peers had FTX ties. In addition, Konstantinidis stated he excluded stablecoins—coins whose value is a fixed function of the price of a government currency or real asset—because stablecoins are not peers of MAPS and OXY. However, he included two stablecoins whose price was pegged to gold prices. By his own admission, including stablecoins would bias trading volume and volume growth upward.

Maps Vault faults the Bankruptcy Court for failing to expressly examine Konstantinidis's lower alternative trading volume growth estimate of 150 percent. However, that estimate relied on the same flawed basket of "peer" tokens as his primary estimate, so it was not clear error to disregard it for sharing the same faults.

4. The Bankruptcy Court did not clearly err in adopting the Ghaidarov model.

Konstantinidis applied the Blockage Method by taking the average of the results from two models: the Chaffe model and the Finnerty model. The Bankruptcy Court did not clearly err in rejecting the Chaffe and Finnerty models and Konstantinidis's synthesis. The Chaffe model projected the value of the tokens would increase the longer the tokens were locked beyond five years. The Finnerty model arbitrarily capped the discount at 32 percent, no matter what the asset was like or how long it was locked. These flaws meant that Konstantinidis's synthesis overestimated the value of the tokens because it projected an asset that cannot be sold for 30 years is more valuable than one that cannot be sold for 5 years. That problem is particularly important because the Blockage Method predicts it will take many years to liquidate the Creditors' claims.

The Bankruptcy Court adopted the Ghaidarov model instead because it projects that discounts for unmarketable assets rise the longer the non-marketability period—avoiding the flaws in the Chaffe and Finnerty models. That decision proved consequential: according to the Ghaidarov model, the value of the Creditors' MAPS and OXY claims should be discounted by 100 percent and 99.9 percent, respectively, leaving them practically worthless.

Maps Vault and Fondation argue the Ghaidarov model is illogical because it projects claims to tokens with a positive market price at the Petition Date have zero value. No matter how steep the appropriate discount, they protest, there must be some number of

tokens that could be sold for some value before the price sinks to zero. Surely tokens trading for *something* cannot be worth *nothing*.

Despite this argument's intuitive appeal, the Bankruptcy Court had good reason to reject it. For one thing, there is judicial and scholarly support for the notion a cryptocurrency token with a positive market price may be worthless anyway. In what appears to be the only other published decision in which a bankruptcy court opined on whether the Petition Date market price of a cryptocurrency reflected the value of a claim to tokens, the Court found "[t]he market price was untethered from the underlying value" because the market for the coin "was severely dislocated" and the price reflected speculation, not the utility of the token. *In re Celsius Network LLC*, 655 B.R. 301, 310 (Bankr. S.D.N.Y. 2023). For that reason, it found the coin likely was worthless. *Id.* at 311. Scholars, too, have warned that a token's price on a cryptocurrency exchange may not reflect its value. *See, e.g.,* Megan McDermott, *The Crypto Quandry: Is Bankruptcy Ready?*, 115 NW. U. L. REV. 1921, 1940 (2021) (cautioning bankruptcy courts against inferring "a [crypto] seller could actually obtain [the] current [market price] in fiat currency" because cryptocurrency exchanges "do not operate in the way that investors in other market-based assets might expect"). Sometimes the truth is counterintuitive.

The record here gave the Bankruptcy Court at least two reasons to think the tokens were worth roughly zero. First, the trading price on the Petition Date likely was illusory. The price derived from a free float of no more than 3 percent of the tokens' supply. Keeping the tradeable supply artificially low tends to keep market price artificially high. As FTX founder Sam Bankman-Fried discussed before the exchange's demise, creating a new token

and floating a miniscule fraction of the supply enables the issuer to create the appearance of value (the trading price based on the limited float multiplied by the total number of shares, including the ones that are non-marketable) when the token is “actually worthless.” Even if the market prices of MAPS and OXY did not reflect the sort of manipulation that doomed FTX, the extremely low share of the tokens on the market suggests the price was not representative of their actual value.

Second, Howell testified that under the circumstances of a liquidation, knowledgeable buyers would know the seller would take any positive price to offload the tokens. Armed with that knowledge, buyers would bid the price down to effectively zero. Much the same would occur in a high-volume sale, even one spread out over time. That the Creditors could have sold one token for the trading price in some non-liquidation context does not imply they could sell even a single coin for that price in this context. In any case, “all that is required is a ‘rough estimate.’” *In re Chemtura Corp.*, 448 B.R. 635, 649 (Bankr. S.D.N.Y. 2011) (quoting *In re Thomson McKinnon Sec., Inc.*, 191 B.R. 976, 989 (Bankr. S.D.N.Y. 1996)).

Maps Vault also argues Howell’s own testimony made it clear error for the Bankruptcy Court to use the Ghaidarov model. But Maps Vault misconstrues her testimony. For instance, it claims Howell’s report states the Creditors’ claims could be liquidated for 15 years before the price would reach zero. But her report does not say that. Instead, the figure Maps Vault cites—designed solely for the purpose of illustrating how the Chaffe, Finnerty, and Ghaidarov models discount for non-marketability over time—shows that, under certain assumptions, the Ghaidarov model would estimate assets with

non-marketability periods of under 15 years as having positive value. Similarly, Maps Vault asserts Howell testified it could sell \$100 million in tokens before the price would reach zero. She did not. She just declined to identify the precise point at which the price would hit zero because that point would vary under different theoretical assumptions beyond the scope of the model.

To be sure, Howell acknowledged the Ghaidarov model can go awry: at high enough trading volume over a long-enough time horizon, it can project a discount greater than 100 percent. But it did not project that impossible discount here. In fact, at a trading volume comparable to the actual annualized trading volume for these tokens, “the Ghaidarov model behaves as expected at multi-decade time horizons, while providing similar [discount] values as the average of the Chaffe and Finnerty models at short horizons.” A862–63 & Figure 12 n.4.

At worst, each of the three models (Chaffe, Finnerty, and Ghaidarov) has a counterintuitive feature: the Chaffe model projects an asset’s value increases the longer it is locked, the Finnerty model refuses to discount an asset more than 32 percent, no matter the asset’s features or the length of the lock, and the Ghaidarov model can, under circumstances inapplicable here, project a discount greater than 100 percent. The Bankruptcy Court had the discretion to choose among these comparably imperfect options. *See Lansford-Coaldale Joint Water Auth. v. Tonolli Corp.*, 4 F.3d 1209, 1216 (3d Cir. 1993).

IV. CONCLUSION

For the reasons stated above, **IT IS ORDERED** that the judgment and order of the Bankruptcy Court are **AFFIRMED**.

Wilmington, Delaware, this 3rd day of December, 2025.

/s/ Thomas L. Ambro
United States Circuit Judge